

## Seasonal Variation in Abundance and Time-Budget of Bottlenose Dolphins (*Tursiops truncatus*) in Bahía San Antonio, Patagonia, Argentina

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The abundance and time-budget of bottlenose dolphins (*Tursiops truncatus*) was assessed in Bahía San Antonio, Patagonia (Argentina) in the years 2009 and 2010. A total of 366.4 boat-based survey hours resulted in 64 contact hours with a total of 88 dolphin groups. Mark-recapture abundance estimations, based on 63 identified dolphins, resulted in a corrected maximum estimate of 97 and 83 individuals during winter, and a minimum of 34 and 38 individuals during autumn of 2009 and 2010 respectively. Between 25% and 68% of the population consisted of unidentifiable individuals depending on the season, indicating the high presence of juveniles and calves.

Behavioural data indicated that the dolphin's time-budget consisted mainly out of resting and feeding, variable over the seasons. Dolphins increased their time feeding and socializing during winter and spring, whereas feeding dropped to a minimum in autumn. During summer, the dolphins spent up to 46% of their time diving, a behaviour presumably associated with a tail out/peduncle-dive foraging strategy.

Based on these data, we assume more prey availability during winter and spring (main food source being pelagic fish) and a notable decrease in prey availability during summer with benthic prey species being the main food source. In autumn, even less prey items might be available. Furthermore, the increase in social behaviour during winter and spring combined with a peak in the presence of calves during these seasons, suggests the existence of a mating and calving season.

These estimates of abundance are in line with the sizes of other coastal populations of bottlenose dolphins elsewhere in the world, and fit the occupancy patterns described for other coastal areas with small resident communities. The study further suggests that dolphins specifically use the study area to rest and feed, and to give birth and raise their young, specifically during winter and spring.